

NATIONAL TRANSPORTATION SAFETY BOARD
Vehicle Recorder Division
Washington, D.C. 20594

November 21, 2017

Personal Electronic Devices

Specialist's Factual Report
By Bill Tuccio, Ph.D.

1. EVENT SUMMARY

Location: Berthoud, Colorado
Date: February 27, 2017
Aircraft: Cessna 172S
Registration: N2461N
Operator: McAir Aviation, LLC
NTSB Number: CEN17FA111

2. GROUP

A group was not convened.

3. DETAILS OF INVESTIGATION

The National Transportation Safety Board (NTSB) Vehicle Recorder Division received the following devices:

Device 1: **Apple iPhone 5S**
IMEI Number: **356962062423612**

Device 2: **Apple iPad Air 2**
Serial Number: **DLXQ8167G5YL**

Device 3: **Apple iPad Air**
Serial Number: **DMPLXPNWFK11**

3.1. Device Description

Personal Electronic Devices are a category of devices comprised primarily of portable computing devices and mobile phones. Portable computing devices are typically capable of internet access, email, messaging services, and can run user-installed applications to perform specific tasks. Depending on the model, mobile phones can perform many of the same tasks as portable computing devices, plus have voice call and text messaging

capabilities. PED user and system data is typically stored on non-volatile memory¹ and can be accessed through manufacturer-provided interfaces.

3.2. Device Condition

Upon arrival at the Vehicle Recorder Laboratory, an examination revealed the iPhone 5S experienced minimal damage (figure 1), the iPad Air 2 experienced structural and water damage (figure 2); and the iPad Air suffered water damage (figure 3). The iPhone 5S started abnormally, and repairs were attempted. The iPads were disassembled and dried in a vacuum oven, and then repairs were attempted.

Figure 1. iPhone 5S.



¹ Non-volatile memory is semiconductor memory that does not require external power for data retention.

Figure 2. iPad Air 2.



Figure 3. iPad Air.



3.3. Data Description

The iPhone 5S was successfully repaired and photos and an encrypted backup were recovered. The photos were non-pertinent and encryption on the backup prevented recovery. No pertinent information were recovered from the photos.

The iPad Air 2 was repaired but was protected by a 6-digit passcode. A possible passcode was unsuccessfully attempted. In agreement with the Investigator-in-Charge, no further attempts were made to recover information.

Repair attempts for the iPad Air were unsuccessful and no information was recovered.